MOUNTAIN PINE BEETLE INFESTATION
IN THE
TWELVE MILE AND BIG CREEK DRAINAGES
CABINET NATIONAL FOREST

Forest roads were constructed in the Twelve Mile and Big Creek drainages of the Cabinet National Forest during the seasons of 1933 and 1934. During the early part of June, 1935, forest officers discovered that the white pine slash from these right-of-ways was heavily infested with broods of the mountain pine beetle resulting from 1934 attacks. Control measures were instituted on June 20th, with an assignment of some 35 CCC laborers and 2 foremen. It is unfortunate that this condition was not known earlier in the season, as by the time this project was instituted a large percent of the overwintering broods had developed to new adults, which are not destroyed by the peeling method of control necessary at that season of the year. During this operation some 200 CCC man-days were used in treating 190 felled trees and 52 logs in the Twelve Mile area and 56 felled trees in Big Creek. Of the 190 trees treated in Twelve Mile, 18 were standing trees adjacent to the road slash.

On June 25th the writer, accompanied by Supervisor Abbott, inspected these two projects, which were under the direct supervision of Frank Foltz, Assistant Forester of the Cabinet National Forest. The insect attacks were more numerous and the resulting broods much heavier in the Twelve Mile Creek area than in Big Creek. Furthermore,

there was more evidence of a previous infestation in the former area than in the latter. The standing infested trees which were treated, as well as a few red-tops which could be seen scattered throughout the area, indicated the existence of a rather heavy normal infestation inthe Twelve Mile area prior to the creation of the road slash. The work in both areas had been thoroughly performed, and no infested material was recorded which had not been marked for treatment.

To determine the status of the 1935 infestation, Mr. Bedard made an extensive survey of these two areas during early October. The data secured from this survey show a relatively light infestation in the Big Creek drainage of .043 infested tree per acre, with a more serious situation in the Twelve Mile area of .5 tree per acre. The difference in the severity of the infestation within these two units was fairly well indicated by conditions encountered during the control operation.

Though the infestation in the Big Creek area can be disregarded for this season at least, the Twelve Mile situation is of a rather serious magnitude. A white pine infestation which averages .5 tree per acre is destroying a large percentage of the total volume each year. This is especially true for this area of mature timber where the stocking of white pine is not heavy. In addition to the number of trees infested, the attacks were recorded as being exceptionally heavy. No positive reason can be given in explanation of

this rather rapid change from a normal infestation to the epidemic condition which now exists, except that the road slash provided an abnormal supply of favorable host material which resulted in the change of conditions as indicated. Regardless of the cause or origin of the existing situation, an infestation exists which, if not checked, will in the opinion of the writer result in the destruction of a large percentage of the mature timber within this drainage during the next three or four years.

Though the existing infestation can be cared for through the institution of artificial control, the ultimate success of such an operation will depend almost entirely upon the amount of reinfestation which will originate from other untreated areas nearby. In considering the possibility of reinfestation from other areas, the type map available at this laboratory shows the Twelve Mile Creek unit to be unusually well isolated from other pine stands. There are some pine areas, other than the Big Creek unit, on the south side of the St. Regis River which could act as a source of reinfestation to the drainage in question. The status of the infestation within these areas should be determined before any definite action relative to control is made. However, from the unusual degree of isolation which is afforded the Twelve Mile Creek area it would seem that, if a thorough clean-up of the infestation is made, success should follow the institution of control.

In addition to the preservation of the merchantable and accessible timber stands, the execution of this project would be of pronounced experimental value. It is a small, accessible area which

would permit of a 100 percent clean-up, even though double spotting was necessary, allowing the effects of thorough control to be accurately measured, which does not seem to be possible with large projects, and it would also provide information relative to the degree of isolation required for successful control.

As the actual acreage of the infested area is not known, it is impossible to more than give an estimate of the total number of infested trees. As stated, Mr. Bedard's survey showed an average infestation of .5 tree per acre, which can be taken as an indication of the infestation within the area actually covered. However, it is not known if the infestation persists through the side drainages or if it is confined to the main stream. However, one can be very sure that there would be from 600 to 800 infested trees requiring treating.

In view of the timber values at stake, as well as the experimental data to be gained, it is recommended that this project be instituted and that all pine trees infested with the mountain pine beetle be located and treated as much before June 10th, 1936, as possible.

Respectfully submitted.

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